

CLAIMS

1. An audio-intonation calibration method in which an audio signal emitted by a subject (S) is reproduced to the auditory organs of said subject (S) after real time processing, which method is characterized in that it comprises the following steps:

- acquisition (E10, E50) of a model audio signal to be imitated;

- spectral analysis (E11, E51) of said model audio signal;

- acquisition (E13, E53) of an imitation audio signal emitted by the subject (S);

- spectral analysis (E15, E55) of the imitation audio signal;

- comparison (E16, E56) of the spectra of the model audio signal and the imitation audio signal;

- correction (E18, E58) of the imitation audio signal as a function of the result of said comparison; and

- reproduction (E22, E62) to the auditory organs of the subject (S) of the corrected audio signal.

2. An audio-intonation calibration method according to claim 1, characterized in that it further includes the following steps:

- measurement (E14, E24) of the dynamic range of the audio signal imitated by the subject (S);

- measurement (E18, E28) of the dynamic range of the corrected audio signal;

- comparison (E19, E59) of the dynamic range of the imitation audio signal and the corrected audio signal; and

- correction (E21, E61) of the dynamic range of the corrected audio signal as a function of the result of said comparison before reproduction to the auditory organs of the subject (S) of the corrected audio signal.

3. An audio-intonation calibration method according to either claim 1 or claim 2, characterized in that the comparison steps (E16, E56) and correction steps (E18, E58) are executed over a series of frequency bands in the range of audible frequencies.

4. An audio-intonation calibration method according to claim 3, characterized in that the series of frequency bands corresponds to a subdivision of the range of audible frequencies.

5. An audio-intonation calibration method according to either claim 3 or claim 4, characterized in that the range of audible frequencies is divided into at least 50 frequency bands.

6. An audio-intonation calibration method according to any one of claims 1 to 5, characterized in that the model audio signal to be imitated is a text and in that said method further includes a step (E24, E64) of displaying said text.

7. An audio-intonation calibration method according to any one of claims 1 to 6, characterized in that it further includes a step (E12) of memorizing the spectral analysis of said model audio signal to be imitated.

8. An audio-intonation calibration method according to any one of claims 1 to 7, characterized in that it includes a step (E22) of emitting said model audio signal to be imitated to the auditory organs of the subject (S) before the step (E13) of acquiring the imitation audio signal emitted by the subject (S).

9. An audio-intonation calibration method according to claim 8, characterized in that it further includes, before the emission step (E22), a step (E23) of modifying the model audio signal to be imitated as a function of parameters representative of a language being studied.

10. An audio-intonation calibration method according to any one of claims 1 to 6, characterized in that the model audio signal to be imitated is a song and in that said method further includes, simultaneously with the step (E62) of reproducing the corrected audio signal to the auditory organs of the subject (S), a step (E62) of emitting an accompaniment signal of said song to the auditory organs of the subject (S).

11. A method of practicing speaking a language being studied, in which method an audio signal emitted by a subject (S) is reproduced to the auditory organs of the subject (S) after real time processing, and which method is characterized in that it uses an audio-intonation calibration method according to any one of claims 1 to 9.

12. A method of performance of a song by a subject (S), in which method an audio signal emitted by a subject (S) is reproduced to the auditory organs of the subject after real time processing, and which method is characterized in that it uses an audio-intonation calibration method according to any one of claims 1 to 6 or claim 10.

13. Fixed or removable information storage means, characterized in that said means contain software code portions adapted to execute the steps of an audio-intonation calibration method according to any one of claims 1 to 10.

14. Fixed or removable storage means characterized in that said means contain software code portions adapted to execute the steps of the method according to claim 11 of practicing speaking a language being studied.

15. Fixed or removable information storage means characterized in that said means contain software code portions adapted to execute the steps of the method according to claim 12 of performing a song.